

A user authentication method is provided which can provide high levels of security without a need for installing any special apparatus on a user side to provide a service to a user over a network.

A numeric value randomly produced by a service providing site is transmitted to a user terminal and a calculation result obtained by applying the numeric value to a numerical calculation method memorized by the user is returned back to the service providing site. The service providing site judges whether the calculation result is right or wrong to perform a user authentication. There is no need for installing any additional device on the service providing site. Information used for the user authentication is not broken, thus avoiding abuse of information for user authentication.